WOODCOCK WASHBURN

INTELLECTUAL PROPERTY LAW

ATLANTA • PHILADELPHIA • SEATTLE

SEATTLE OFFICE
999 Third Avenue, Suite 3600
Seattle, WA 98104
206-332-1380
Fax: 206-624-7317

FACSIMILE

DATE: **February 22, 2008**   JOB CODE:

Please deliver this and the following pages to:

Name:	**Examiner Jeffery A. Brier**
Company/Firm:	**United States Patent & Trademark Office**
Telecopier No.:	**(571) 273-7656**
Client/Matter No.:	**United States Patent Application No. 09/265,493** **Attorney Docket No.: MSFT-1167/191769.01**
Sender's Name:	**Masako Calico for Michael Swope**
Pages to Follow:	**9**

If transmission is not complete, please call our **Seattle Office** at **(206) 332-1380.**

COVER MESSAGE:

Thank you for scheduling a telephonic interview for Thursday, February 28 at 11:00am (PST) / 2:00pm (EST) to discuss the Final Action dated January 7, 2008. Please see the attached proposed amendment as as interview agenda.

WOODCOCK WASHBURN LLP *A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS*   www.woodcock.com

PAGE 1/10 * RCVD AT 2/22/2008 2:24:36 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/35 * DNIS:2737656 * CSID: * DURATION (mm-ss):03-12

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01
Application No.: 09/265,493
Office Action Dated: January 7, 2008

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 CFR § 1.116

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
David C. Tannenbaum

Confirmation No.: **4578**

Application No.: **09/265,493**

Group Art Unit: **2628**

Filing Date: **March 9, 1999**

Examiner: **Jeffery A. Brier**

For: **DEVICE, METHOD, AND SYSTEM FOR GENERATING PER-PIXEL LIGHT VALUES USING TEXTURE PARAMETERS**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

REPLY PURSUANT TO 37 CFR § 1.116

In response to the Official Action dated **January 7, 2008**, reconsideration is respectfully requested in view of the amendments and/or remarks as indicated below:

☐   **Amendments to the Specification** begin on page of this paper.

☒   **Amendments to the Claims** are reflected in the listing of the claims which begins on page 2 of this paper.

☐   **Amendments to the Drawings** begin on page   of this paper and include an attached replacement sheet.

☒   **Remarks** begin on page 7 of this paper.

☒   The Commissioner is hereby requested to grant an extension of time for the appropriate length of time, should one be necessary, in connection with this filing or any future filing submitted to the U.S. Patent and Trademark Office in the above-identified application during the pendency of this application. The Commissioner is further authorized to charge any fees related to any such extension of time to Deposit Account No. 23-3050.

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01   **PATENT**
Application No.: 09/265,493   **REPLY FILED UNDER EXPEDITED**
Office Action Dated: January 7, 2008   **PROCEDURE PURSUANT TO**
                                                          37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently amended) In a computer graphics system, a method for applying texture mapping in per-pixel operations, the method comprising:

receiving a plurality of parameters that are used to define a pixel value at a pixel in a primitive;

selecting parameters from the plurality of parameters to generate selected parameters and unselected parameters where the unselected parameters are the plurality of parameters that are not selected;

substituting a texture value from a texture map in place of ~~a pixel value produced from~~ at least one selected parameter used in an algorithm that uses the selected parameters;

determining a texture value for ~~each of~~ the at least one selected parameter by accessing a set of textures, the texture value ~~for each selected parameter~~ varying over the primitive; and

determining the pixel value by using the unselected parameters and the texture values over the primitive, wherein the set of unselected parameters are not texture values and the texture values are associated with the selected parameters.

2.   (Previously Presented) The method as recited in claim 1, further comprising: displaying the pixel according to the determined pixel value on a display device.

3.   (Original) The method as recited in claim 1, wherein the plurality of parameters includes per-primitive parameters, which are defined over the entire primitive.

4.   (Original) The method as recited in claim 1, wherein the primitive is a polygon.

5.   (Original) The method as recited in claim 1, wherein the plurality of parameters includes both scalar and vector parameters.

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01   PATENT
Application No.: 09/265,493   REPLY FILED UNDER EXPEDITED
Office Action Dated: January 7, 2008   PROCEDURE PURSUANT TO
                                                        37 CFR § 1.116

6.   (Original) The method as recited in claim 3, wherein the plurality of
parameters includes one or more of emission material color, ambient material color, global
ambient light color, attenuation factor, ambient light color, diffuse material color, diffuse
light color, specular material color, specular light color, a surface normal vector, a specular
exponent, an environment map color, and a shadow color.

7.   (Original) The method as recited in claim 1, wherein the operation of
determining the texture value further comprises the operations of:
        receiving texture coordinates for accessing the set of textures; and
        accessing the textures in response to the texture coordinates to generate the texture
values.

8.   (Previously presented) The method as recited in claim 7, wherein the accessed
texture includes a plurality of texture elements, the method further comprising the operation
of:
        filtering the accessed texture elements of the texture map onto the selected pixel to
generate the texture value associated with the pixel.

9.   (Currently amended) The method as recited in claim 1, wherein a light value
is generated for the pixel value by evaluating a lighting equation that is defined in terms of
~~the plurality of~~ parameters ~~the substituted texture value from the texture map~~.

10.   (Currently amended) A device for generating per-pixel values of pixels in a
primitive by using texture parameters, the pixel values of the pixels in the primitive being
defined by a plurality of parameters, where a pixel value is not such a parameter, the device
comprising:
        a texture memory for storing a set of texture maps;
        a texture unit for receiving texture coordinates for accessing a set of selected texture
maps in the texture memory, the set of selected texture maps being associated with a set of
selected parameters~~, each selected parameter corresponding to a selected parameter in each~~
~~pixel in the primitive,~~ wherein the selected parameters ~~is~~ are selected from among the

<div style="border:1px solid">

DRAFT- For Discussion Only

</div>

DOCKET NO.: MSFT-1167/191769.01
Application No.: 09/265,493
Office Action Dated: January 7, 2008

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 CFR § 1.116

plurality of parameters that partially define a pixel value in the primitive, ~~each selected parameter corresponding to a selected parameter in each pixel in the primitive,~~ the texture unit generating a texture value associated with the pixel from each of the selected texture maps, and wherein ~~an~~ at least one other parameter in the plurality of parameters ~~is~~ are not selected and the at least one other parameter that ~~is~~ are not selected from the plurality of parameters ~~defines~~ define a set of unselected parameters; and

a rendering unit for generating the pixel value in response to the generated texture values ~~of the selected parameters~~ and to the unselected parameters.

11.   (Original) The device as recited in claim 10, wherein the primitive is a polygon.

12.   (Original) The device as recited in claim 10, wherein one or more of the selected parameters are selected from a parameter group consisting of emission material color, ambient material color, global ambient light color, attenuation factor, ambient light color, diffuse material color, diffuse light color, specular material color, specular light color, a surface normal vector, a specular exponent, an environment map color, and a shadow color.

13.   (Original) The device as recited in claim 10, wherein the plurality of parameters includes both scalar and vector parameters.

14.   (Original) The device as recited in claim 10, wherein the pixel value is a light value that is generated by evaluating a lighting equation using the plurality of parameters.

15.   (Currently amended) A computer graphics system for generating per-pixel values for pixels in a primitive by using texture parameters, the pixel values being defined by a plurality of parameters, the system comprising:

a bus;

a processor coupled to ~~a~~ the bus;

a main memory coupled to the bus;

a storage unit coupled to the bus; and

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01   **PATENT**
Application No.: 09/265,493   **REPLY FILED UNDER EXPEDITED**
Office Action Dated: January 7, 2008   **PROCEDURE PURSUANT TO**
                                                      37 CFR § 1.116

a graphics subsystem coupled to receive a plurality of parameters defining the pixel

values for the pixels in the primitive, the graphics subsystem including:

means of selecting parameters from the plurality of parameters to generate selected

parameters and unselected parameters where the unselected parameters are the plurality of

parameters that are not selected;

substituting a texture value from a texture map in place of ~~a value produced from~~ at

least one selected parameter used in an algorithm that uses the selected parameter to

determine a pixel value;

means for determining a texture value for ~~each of~~ the at least one selected parameters

by accessing a set of textures, the texture value ~~for each selected parameter~~ varying over the

primitive; and

means for determining the pixel value by using the unselected parameters and the

texture values over the primitive, wherein the set of unselected parameters are not texture

values and the texture values are associated with the selected parameters.

16.   (Original) The system as recited in claim 15, wherein one or more of the

selected parameters are selected from a parameter group consisting of emission material

color, ambient material color, global ambient light color, attenuation factor, ambient light

color, diffuse material color, diffuse light color, specular material color, specular light color,

a surface normal vector, a specular exponent, an environment map color, and a shadow color.

17.   (Original) The system as recited in claim 15, wherein the plurality of

parameters includes both vector and scalar parameters.

18.   (Currently amended) The system as recited in claim 15, wherein the pixel

value is a light value that is generated by evaluating a lighting equation using the substituted

texture value from the texture map.

19.   (Original) The system as recited in claim 15, wherein the primitive is a

polygon.

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01   **PATENT**
Application No.: 09/265,493   **REPLY FILED UNDER EXPEDITED**
Office Action Dated: January 7, 2008   **PROCEDURE PURSUANT TO**
                                                       37 CFR § 1.116

20.   (Original) The system as recited in claim 15, wherein the means for

determining a texture value filters the accessed set of textures to generate the texture values.

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01   **PATENT**
Application No.: 09/265,493   **REPLY FILED UNDER EXPEDITED**
Office Action Dated: January 7, 2008   **PROCEDURE PURSUANT TO**
                                                                          37 CFR § 1.116

REMARKS

Claims 1-20 are pending in the application. Claims 1, 10 and 15 are the independent claims. Claims 1-20 stand rejected.

As an initial matter, Applicant traverses the finality of the rejection and requests withdrawal of the same. The examiner maintains in the section of the action entitled *"Response to Arguments"* that applicants amendments have been *fully* considered but finds them unpersuasive "because the claims cover any parameter that can be produced from an algorithm including the parameters that selects textures such as the parameter that selects brick wall texture 50 and the parameter that selects paint texture 50, see Lauzon at column 4 lines 50-58, or including the parameters that selects the texture map, see Lathrop mip map selection 28." However, the examiner issued no such art rejection. Moreover, the examiner indicates that the "previous prior art rejection could be maintained, however, in view of indefinite issues the art rejection will be reserved for later consideration when the claims have been clarified by appropriate claim amendments." Applicants point out that the previous rejection contained no such prior art rejection.

Applicants further remind the examiner of MPEP 707.07(g) regarding "Piecemeal Examination." That section of the MPEP admonishes examiners to reject each claim on all valid grounds available. That does not appear to have happened here. Rather, the examiner has issued a final rejection of all of the claims without providing a single prior art rejection in this or the previous rejection.

For the foregoing reasons, Applicants respectfully traverse the finality of the rejection.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01 (o). Correction of the following is required: The limitation found in claims 6, 12, and 16 "a surface normal vector" is not found in the specification, refer to applicants specification at page 12 last line to page 13 line 4.

DRAFT- For Discussion Only

DOCKET NO.: MSFT-1167/191769.01
Application No.: 09/265,493
Office Action Dated: January 7, 2008

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 CFR § 1.116

Applicants respectfully disagree. The phrase is clearly described at least on page 5 of the specification. The meaning of the phrase is clearly "ascertainable by reference to the description." 37 C.F.R. § 1.75(d)(1). Moreover, the same language appeared in original claim 6. Original claim 6 formed part of the specification. See MPEP 608.01(o).

Applicants respectfully request reconsideration of the objection.

Claim Rejections - 35 USC §112

Claims 1-20 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to Claim 1, 10 and 15, the examiner maintains that the parameters included in the claim that defines a pixel value is unclear since a value that selects a texture is a parameter that defines a pixel. In response, Applicant has amended the claim to clarify in the claim the claimed parameter.

With respect to claims 9, 14 and 18, the examiner maintained that the lighting equation is not being used to determine the pixel value in the parent claims. Applicant has amended both the parent and the dependent claims to clarify.

The remaining claim were rejected as based on a rejected base claim.

Applicants submit that the rejection has been overcome by amendment.

<div align="center">

DRAFT- For Discussion Only

</div>

DOCKET NO.: MSFT-1167/191769.01   **PATENT**
Application No.: 09/265,493   **REPLY FILED UNDER EXPEDITED**
Office Action Dated: January 7, 2008   **PROCEDURE PURSUANT TO**
                                      37 CFR § 1.116

<div align="center">

CONCLUSION

</div>

In the view of the foregoing amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the application for any reason, the Examiner is encouraged to contact Applicants' representative.

Date:

Michael J. Swope
Registration No. 38,041

Woodcock Washburn LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439